W. L. AUSTIN.

JOINT FOR CONTAINERS.

APPLICATION FILED NOV. 27, 1903.

NO MODEL. Witnesses:-Augustus Bapes Tetus Horrons.

United States Patent Office.

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JOINT FOR CONTAINERS.

SPECIFICATION forming part of Letters Patent No. 750,565, dated January 26, 1904.

Application filed November 27, 1903. Serial No. 182,939. (No model.)

To all whom it may concern:

Be it known that I, William L. Austin, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Joints for Containers, of which the following is a specification.

My invention relates to certain improvements in containers, for which application for Letters Patent was filed by me on the 27th day of March, 1902, under Serial No. 100,335 and

allowed November 4, 1903.

The object of my present invention is to modify the construction of the joint and dispense with a retaining-ring, the sections of the container being made to overlap, as fully described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section through a portion of a container, showing the method of attaching the sections. Fig. 2 is a sectional perspective view illustrating more clearly the joint between the two sections of the container, and Fig. 3 is an external view of a container made in accordance with my invention.

Referring in the first instance to Figs. 1 and 2, A A are two sections of a container, which are coupled together by an intermediate section B, which takes the place of the ring mentioned in the application above alluded to. In 3° this instance instead of the two sections A A abutting or being placed so close that the central groove forms the internal ribs by which the sections are secured together they are spread apart and the section B forms one of 35 the sections of the container. Independent ribs are formed at each end, which mesh with ribs on the sections A A. The external ribs a a on the sections A are made in the manner clearly shown in Fig. 2, having one edge, a', 4° abrupt and the other edge, a^2 , inclined. Some distance from the end of each section A is a deep external flange d.

The section B is of such length as to fit between the flanges dd and has internal ribs bb, 45 which snugly fit the grooves between the ribs a of the sections A, and the ribs a in turn fit

the grooves of the section B.

On the section B are deep internal flanges c, which abut against the ends of the sections

A, as illustrated in Fig. 1, so that there is a 50 zigzag joint between the sections A and B, as well as the step-joint formed by the annular ribs a and b.

In assembling the sections of the container I heat the section B to such a degree that it 55 will expand sufficiently to allow the sections A to be inserted in each end of the section B, and they are forced against the section B so that the shoulders d and c come in contact with the ends of the sections. The section B is then allowed to cool, and in shrinking the ribs b will enter the spaces between the ribs a, and eventually a tight joint will be formed between the two sections, avoiding the use of other fastenings.

My invention is especially designed to be used as a container for air under high pressure; but it will be understood that it can be used to contain any fluid under pressure.

In Fig. 3 I have shown one form of container made in accordance with my invention, in which five sections are used, end sections A' A² and central section A³. These several sections are held together by the intermediate sections B' B². In some instances the container may be made in two sections, one section overlapping the other, in which case only a single joint will be necessary, and it will be understood that a container having as many sections as desired may be constructed in accordance with my invention.

I claim as my invention—

1. The combination in a container, of two sections, one section overlapping the other section, the underlapping section having a series of annular external ribs at one end, the overlapping section having a series of annular internal ribs at one end, the sections being so proportioned that the ribbed end of one section will slip over the ribbed end of the other 9° section when heated, the external section being shrunk upon the internal section and binding tightly upon the ribbed portions thereof, substantially as described.

2. The combination in a container, of two 95 sections, one section designed to slip over the other section when heated, the external section having a series of internal ribs, the in-

ternal section having a series of external ribs meshing with the ribs of the external section, each section having flanges abutting the ends of the other section, substantially as described.

5 3. The combination in a container, of two sections, one section arranged to slip over the other section when heated, one section having a series of internal ribs, each rib being abrupt on one side and inclined on the opposite side, the other section having a series of external ribs abrupt on one side and inclined on the opposite side, said external section being shrunk upon the internal section and binding tightly upon the flanged portion thereof, thereby forming a tight joint, substantially as described.

4. The combination in a container, of three sections, each end section having a series of

external ribs on one end, an intermediate section having a series of internal ribs on each 20 end, the sections being so proportioned that the intermediate section when heated will expand sufficiently to allow the other sections to be inserted in each end thereof, said intermediate section being shrunk upon the other 25 sections and binding tightly upon the flanged portion thereof forming a tight joint, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two sub- 30

scribing witnesses.

WM. L. AUSTIN.

Witnesses:

LAWFORD H. FRY, W. N. TUTTLE.